



THE TRANSMITTER

July 2018

Article Reviews

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Longitudinal analysis of impulse control disorders in Parkinson disease.

Dopamine agonists (DA) are commonly used to treat the symptoms of Parkinson's disease, and have been associated with an increased risk of impulse control disorders (ICDs) in cross-sectional studies. However, there is limited longitudinal data on the risk of development of ICDs in treated PD patients over time. In this study, Corvol et al. followed 411 patients diagnosed with early/mid-stage PD (duration ≤ 5 years) for up to five years (average 3.3 years). ICDs were assessed by movement disorder specialist using the UPDRS part I. At baseline, ICDs were observed in 19.7% of patients and were more common with younger age, longer disease duration and higher DA exposure. Of patients who did not have ICDs at baseline, 46.1% developed ICDs within five years. Incident ICDs were highly associated with DA exposure (12.4% in patients without vs. 51.5% in DA-exposed patients). The prevalence ratio of ICDs was highest for pramipexole and ropinirole (PR of 4.67 and 4.86 respectively) compared with no DA use. In addition to DA exposure, incident ICDs were associated with younger age, being single, coffee drinking, obesity, and male sex. Of the 30 patients who had ICDs and then discontinued their DAs, ICDs progressively resolved and 50% of patients were ICD-free after one year. The authors concluded that ICDs were associated with DA use, that there was a dose and time dependent response, and that ICDs progressively resolve after DA discontinuation.

Neurology; June 2018. Corvol et al.

Mild TBI and risk of Parkinson disease: A Chronic Effects of Neurotrauma Consortium Study.

Numerous studies have demonstrated an association between head injury and risk of Parkinson disease (PD). However, many of these case-control studies have not been able to rule out reverse causation (that early symptoms of PD cause falls or other accidents leading to head injury) and evidence from large longitudinal cohorts is lacking. Additionally, whether milder head injuries are associated with PD risk has been unclear. Gardner et al. performed a retrospective longitudinal cohort study of 325,870 US Veterans (half with TBI, half matched controls; average age 47.9 ± 17.4 years; average follow-up 4.6 years). Diagnoses of TBI and PD were initially ascertained using ICD-9 codes and TBI was further characterized as mild or moderate-severe using well-characterized Department of Defense criteria. Importantly, only incident PD diagnoses occurring more than 1 year after TBI were included. In models adjusted for medical and psychiatric comorbidities, all-severity TBI, mild TBI, and moderate-severe TBI were associated with increased risk of PD (hazard ratio [95% CI]: all-severity TBI 1.71 [1.53-1.92]; mild TBI 1.56 [1.35-1.80]; moderate-severe TBI 1.83 [1.61-2.07]). This study suggests that even mild TBI is associated with a 56% increased risk of PD and highlights the importance of TBI prevention, long-term follow-up of TBI-exposed veterans, and the need to determine mechanisms and modifiable risk factors for post-TBI PD.

Neurology; 2018 May 15;90(20):e1771-e1779

Flavor perception and the risk of malnutrition in patients with Parkinson's disease.

Parkinson's disease is associated with increased risk of malnutrition and a lower body mass index (BMI). This study investigated the relationship between flavor perception (olfactory and gustatory) and the risk of malnutrition. 63 PD patients participated with MMSE >24, mean age 65.9, disease duration 10.6 and mean Hoehn and Yahr of 2.3, median BMI 25.04. Risk of malnutrition was assessed using MUST (Malnutrition Universal Screening Tool) and BMI. "Sniffin sticks" were used to test olfaction : odor identification, discrimination and detection threshold. "Taste strips" were used to test taste: sweet, sour, bitter and salt. 68.3% of the PD patients had an impaired sense of smell of which 47.6 % were anosmic. Odor identification was the most impaired modality followed by discrimination and detection threshold. 6.3% had hypogeusia which was not significantly correlated to BMI. 6.3% were at medium risk for malnutrition. A small, but significant correlation was found between olfactory function and BMI suggesting that hyposmia, not hypogeusia may contribute to weightloss in PD and increase risk of malnutrition.

J Neural Transm 2018; 125(6) 925-930.

Committee Activities

Clinical Care Committee

- Rotation of Committee Chair: Leadership for the clinical care committee rotates amongst the PADRECCs. The Houston PADRECC leads the committee for July/August. The committee meets via conference call the first Tuesday of the month at 12pm (EST)
- Standardize and Optimize Clinical Care: The committee continues to discuss latest research on PD, new treatment strategies and a variety of clinical issues to improve patient care and outcomes. It also serves to provide clinical support to the consortium network by focusing on measures to standardize clinical care across the PADRECC network. Recent agenda items have included discussions on:
 1. Clinical experience with recently introduced medications for Parkinson's and Huntington's disease including Rytary, Extended Release Amantadine, Pimavanserin, deutetrabenazine etc.
 2. Continued discussion about referrals, outcomes and target selection trends regarding deep brain stimulation surgery for PD and ET.
 3. Continued discussion focused on clinical experience sharing among the group regarding DUOPA™ (carbidopa and levodopa) enteral suspension for the treatment of motor fluctuations in advanced Parkinson's disease
 4. Discussion about newer avenues of delivering tele-health within the VA healthcare system including video-connect
 5. Discussion about newer clinic models to provide focused treatment for non-motor symptoms of PD (Palliative Care Clinics) and to improve overall health of our patient population (Wellness Clinics)

6. Discussion about the role of kinesiotherapy in Parkinson's disease
7. Strategies to minimize the impact of reduced workforce at the PADRECC, innovative ideas to improve performance and deliver care
8. Discussion about collaborative research, including involvement in industry supported projects like Apomorphine subcutaneous infusion study.
9. The prevalence of vitamin D deficiency in Parkinson's disease , the need to monitor and strategies and outcomes of current replacement strategies.
10. Discussion about management of psychogenic movement disorders

Education Committee

- **PADRECC/EES Movement Disorder Series:** The fourth audioconference for FY 18 was held on May 10th, 2018, “**Psychiatric Issues in PD**” by Joel Mack, MD, Portland PADRECC. The audioconferences are archived on the National website www.parkinsons.va.gov under the Movement Disorder Series tab. Please see the **Dates to Remember** section below for a listing of upcoming FY18 audioconferences and mark your calendars.
- **National VA PD Newsletter:** The newsletter is currently being assembled and will be emailed electronically once completed.
- **PD at Home:** Monthly PD telephone education/support group conference available nationwide on the 2nd Tuesday of each month: 10am PT, 11am MT, 12p CT, 1pm ET. Monthly flyers will be emailed to all Consortium Members, please advertise to your PD patients.
- **National Website Maintenance:** The committee performs maintenance checks of the National Website to ensure information is current and up-to-date.
- **PADRECC Transmitter:** This committee continues to assemble and distribute this *e*-newsletter every other month.
- **Resources available on the National Website-** *Please share with your patients*
 - **Updated Patient Education Brochures-** <https://www.parkinsons.va.gov/patients.asp>
 - Exercise and Physical Activity
 - Fall Prevention
 - PD Medications
 - Motor Symptoms
 - Non-Motor Symptoms
 - Agent Orange and Toxic Exposures and PD
 - **My Parkinson's Story-**<https://www.parkinsons.va.gov/patients.asp>
A series of short videos prepared by the VA PADRECCs addressing various aspects of Parkinson's disease.

- **Suggested Education Essentials for Veterans with PD** <https://www.parkinsons.va.gov/patients.asp>
- **PADRECC Support Group Listings** <https://www.parkinsons.va.gov/patients.asp>
- **Updated Resource Request Form**-PADRECC staff and consortium members can order bulk supply of FREE educational materials from PF and APDA. Please click on the following website and complete the **Resource Request Form** and mail or fax to address listed:
<https://www.parkinsons.va.gov/clinicians.asp>

Philadelphia PADRECC Service Area Updates

Philadelphia PADRECC

Corporal Michael J. Crescenz VAMC

Director: John Duda, MD

Clinical Update

- **Expansion of Telehealth Services**

The Philadelphia PADRECC has expanded telehealth to 7 VA Medical Centers and 16 CBOCs within VISN's 2 and 4. Telehealth is used to provide consultative services, follow up care, DBS stimulation adjustments, and medication management. *VA Video Connect* into the home is a modality used to reach Veterans who find traveling to a VAMC or a CBOC too difficult and is a great tool for clinicians to follow up on the most vulnerable Veterans. With the expansion of their telehealth program, the Philadelphia PADRECC recently converted an old storage room to a telehealth clinic room freeing up valuable clinic space needed by other providers.

Education Update

- **PD 101**

This 2 hour program was held on April 13, 2018 and provided an overview of Parkinson's disease symptoms, treatment options and the Philadelphia PADRECC Team. Participants also had the opportunity to ask questions. This program was held in-person at the Philadelphia PADRECC and broadcasted to 2 area VAMCs and 4 area VA Community Based Outpatient Clinics (CBOCs) to increase accessibility.

- **Workshop for Veterans with Parkinson's Disease at The Philadelphia Museum of Art**

This summer the Philadelphia PADRECC is partnering with the Philadelphia Museum of Art's Accessible Program to offer a **6 Week Selfie-Project**~a self-portrait workshop for Veterans with PD. This workshop will include six weeks of instruction and a one-hour private guided tour of the museum. Participants' artwork will be featured in an exhibition at the Corporal Michael J. Crescenz (Philadelphia) VAMC

- **Walk to Stamp Out Parkinson's**

Last October, several members of the Philadelphia PADRECC Team and their families joined the local Parkinson's community in **The Parkinson's Council's: Walk to Stamp out Parkinson's**. The walk was held at The Philadelphia Zoo and was a fun day had by all raising awareness for Parkinson's disease. We are excited to walk again this October!

Research Update

- **Drug-induced Parkinsonism (DIP): A canary in the coal mine?**

DIP associated with dopamine receptor blocking drugs (most often antipsychotics) is the second most common cause of Parkinsonism and can be clinically indistinguishable from PD. In some cases, when symptoms persist after drug withdrawal, DIP may represent “unmasking” of prodromal PD-with the offending drugs acting as a “stress test” for dopaminergic pathways. In two studies funded by a VISN 4 pilot award, we found that hyposmia, severe non-motor symptoms or the appearance of DIP with low-intensity dopamine blockers may signal underlying neurodegeneration. We are continuing to study the relationship between DIP and underlying PD using clinical and radiologic biomarkers.

- **The Immune System and Parkinson’s Disease**

Dr. Morley and the PADRECC are collaborating with a local biotech company (Longevity Biotech) on a project recently funded by the Michael J. Fox Foundation to study whether the immune system plays a role in PD. The team will recruit *pairs of patients and their caregivers* to study whether immune cells and other blood markers are different in PD and are associated with disease severity or other PD characteristics. This study will begin recruiting subjects in June 2018.

- **Bacteria and Parkinson’s Disease**

Dr. Fullard and Dr. Duda, in collaboration with Dr. Noam Cohen from the Ear Nose and Throat Department, continue to study how bacteria that colonize our body might contribute to the risk of Parkinson's disease. This study is trying to understand if there are genetic reasons why some people with PD have certain types of bacteria in the hopes of developing new therapies in the future. Once recruitment is complete, we will examine differences in the genetics of the taste receptors and in the bacteria of the nose and gut between those with Parkinson’s disease and those without.

- **Traumatic Brain Injury**

Dr. John Duda, PADRECC Director and his colleagues, Drs. Kacy Cullen, Isaac Chen and John Wolf, from the Department of Neurosurgery at the University of Pennsylvania, continue studies funded by the Rehabilitation Research and Development Service of the Department of Veterans Affairs to study the relationship between brain trauma and neurodegeneration. The researchers have published several studies that have shown how the brain reacts to trauma and how that could possibly lead to chronic neurodegenerative disease development. It is hoped that these studies will lead to treatments to prevent the development of these neurodegenerative diseases in Veterans and others who have suffered head injuries.

- **Neurorestoration in Parkinson’s Disease**

Dr. John Duda and his colleagues Kacy Cullen, PhD, and Isaac Chen, MD, PhD from the Center for Neurotrauma, Neurodegeneration, and Restoration (CNNR) at the Crescenzo VA Medical Center, continue to investigate whether one of the main brain pathways affected in Parkinson’s disease, the nigrostriatal pathway, can be generated in a petri dish and transplanted in animal models to reverse the motor symptoms

in PD. While studies are early, the success of their efforts to date have led to several publications and special recognition at several different scientific meetings.

- **Exercise in PD**

Identifying early or prodromal PD that has been “unmasked” by DIP allows intervention at the earliest stages of disease. Dr. Morley continues his VA Rehabilitation R&D service Career Development Award entitled **“Effect of exercise on recovery in drug-induced Parkinsonism and Parkinson disease.”** Subjects with suspected DIP who are found to have abnormal DAT-SPECT are randomized to exercise (aerobic walking) or no intervention. We are examining the short term effects of exercise after 8 weeks and a potential disease modifying effect of exercise using serial DAT-SPECT and biochemical markers after 52 weeks.

If exercise can benefit our PD patients, how can we make sure they are getting enough? Dr. Sneha Mantri, PADRECC fellow, is finishing a study to better understand exercise and activity levels in PD. She is examining PD patients’ attitudes and barriers to exercise and comparing them to activity levels using both a self-reported survey and objective monitoring in the community using wearable devices. Dr. Mantri hopes to use this information to identify potential interventions to increase exercise and activity levels in PD patients.

West Haven, CT

VA Connecticut Healthcare System-West Haven Campus

Director: Diana Richardson, MD

The West Haven Parkinson's Disease Consortium has had an active year celebrating our 10 years anniversary. We remain active in promoting good health, well-being, fitness and education for our Veteran patient with Parkinson's disease and other movement disorders. Currently we continue to hold an annual **PD Lectures & Support series** throughout the year. We also continued traditions in April for Parkinson’s Awareness month with the **Annual Parkinson Fair**, the annual **Parkinson's Disease Symposium**; and team representation at the **Parkinson's Unity Walk** in NYC central Park. This year, we sponsored and conducted an **Agent Orange Information, Research and Education support group** to help Veterans with Agent Orange Exposure and other environmental exposure understand their conditions. We have been able to assist Veterans in enrollment in the exposure related registries and also help with pursuit of compensation.

Dates to Remember

September 13, 2018

EES/PADRECC Movement Disorders Series

Topic: Neurotoxin use for treating PD Symptoms

<http://www.parkinsons.va.gov/>

November 8th, 2018

EES/PADRECC Movement Disorders Series

Topic: Lewy Body Dementia

<http://www.parkinsons.va.gov/>

October 5-9, 2018

International Parkinson and Movement Disorder Society (MDS)~International Congress

Hong Kong

<http://www.mdscongress.org/Congress-2018.htm>

June 2-7, 2019

5th World Parkinson Congress

Kyoto, Japan

<https://www.worldpdcoalition.org/default.aspx>